

Climate Change and Reduction of Greenhouse Gas Emissions
Submission by CLP Holdings to LegCo Panel on Environmental Affairs

Introduction

CLP shares the concerns about global warming and climate change. Energy is essential for economic growth and social development. Over the coming decades this fact will lead to a surge in energy demand as developing economies grow. If current trends continue, fossil fuels will provide most of the planet's energy for most of the century, leading to a considerable rise in greenhouse gas (GHG) emissions including carbon dioxide (CO₂). This trend must be reversed by managing emissions, decarbonizing the world's energy mix and using resources more efficiently to stabilize and then reduce GHG emissions.

Over the last century the amount of CO₂ in our atmosphere has risen, driven in large part by our usage of fossil fuels, but also by other factors that are related to rising population and increasing consumption, such as land-use change. Coincident with this rise has been an increase in the global average temperature, up by nearly a degree Celsius. If these trends continue, global temperatures could rise by a further one to four degrees by the end of the 21st century, potentially leading to disruptive climate change in many places. By starting to manage our GHG emissions now, we may be able to limit the effects of climate change to levels that we can adapt to.

By 2050, global GHG emissions would need to be at level similar to 2000, but also trending downward, in contrast to a sharply rising demand for energy over the same period. No one country, company or technology will be sufficient to stop global warming. We need a mix of solutions which focus on using energy more efficiently and reducing its carbon intensity – it is everyone's responsibility.

Kyoto Protocol

The Kyoto Protocol is an international agreement under the United Nations Framework Convention on Climate Change (UNFCCC). Under this agreement, participating developed economies have taken on binding obligations to reduce their GHG emissions to an average of 5% below emissions in 1990. Developing countries such as China (including Hong Kong) have no binding obligations. Developing countries are eligible to participate through the Clean Development Mechanism (CDM). This mechanism allows developed economies to meet their obligations by securing GHG emission reductions in signatory developing countries including China. The Kyoto Protocol will conclude in 2012.

CLP considers it essential that a new international framework be put into place upon the conclusion of the Kyoto Protocol. The framework is necessary to support significant changes in energy infrastructure world wide. The new framework should expand or replace the CDM to provide broader incentives for clean energy investments in developing countries.

Hong Kong Scenario

In Hong Kong, GHG emissions per capita and per kilowatt hour are relatively low because there is little manufacturing, excellent public transportation, and a diverse mix of fuels for power generation (particularly low-emitting natural gas and non-emitting nuclear). Hong Kong has the potential to stabilize or reduce GHG emissions over the next 10 to 20 years through four key approaches:

- improved energy efficiency and conservation, particularly in buildings
- alternate, hybrid and electric vehicles, traffic management and public transportation
- greater reliance on natural gas and nuclear power, and
- growth of renewable energy over time.

Businesses, government *and consumers* must be engaged. Implementing these approaches would require a clear and integrated energy policy that guides the resource mix in order to achieve an excellent balance among reliability, affordability, energy security and environment.

Managing current and future emissions from CLP's business

CLP recognizes the importance of the issue in our business – our strategy and performance goals are under direct supervision of the Board of Directors.

CLP's Hong Kong business:

- CLP Power Hong Kong GHG emissions in 2006 were within 2% of 1990 emissions, despite growth of more than 80% in usage since then.
- Though not subject to any binding obligation, CLP Power Hong Kong held GHG emissions to this level by fuel diversification, specifically nuclear and natural gas.
- Prompt development of LNG terminal is critical to avoid large growth in GHG emissions. **This is the single largest factor affecting HK's future GHG emissions in the next 10 years.**
- CLP's energy efficiency services, grid connection of self-generating customers with on-site renewables, and development of renewable energy all help to avoid GHG emissions in Hong Kong.
- CLP's Energy Innovation Fund, now in its 5th year, supports clean energy education and development in the Hong Kong community. CLP also sponsors university research on renewable energy resources and applications in the region, and provides the results to the public.

CLP's International Portfolio:

- Since natural gas has only half the GHG emissions of coal, we also aim to use more in Australia and elsewhere in our portfolio. Our experience in Hong Kong is being leveraged throughout the region.
- Renewables have virtually no GHG emissions. CLP has a voluntary target that renewables will account for 5% of our generating capacity by 2010. CLP's renewable portfolio today includes 16 facilities with a combined capacity of 285 Megawatts

(equity basis), in addition to the 330 Megawatt hydro project which we are developing in Sichuan province. CLP's voluntary development earned us the Renewable Energy Developer of the Year award from Euromoney and Ernst & Young in 2006.

- Energy efficiency and conservation measures are equally important, and these efforts should be increased. CLP's policy is to support customer's improvements in energy efficiency. We also offer green energy products through our Australian retail business, TRUenergy.
- Today, there are no commercially viable methods of capturing GHG emissions from large power plants. In the longer term, new technologies such as coal gasification, carbon capture and sequestration could be used to control emissions from fossil fuels. CLP aim to help bring these technologies to our service areas.
- CLP conduct a climate risk assessment of all proposed new investments.

Working with the international community

Climate change is a global issue, and CLP Group is working internationally, through:

- **World Business Council for Sustainable Development (WBCSD)** – CLP is among eight companies leading the electric utilities sector project. Our report “Powering a Sustainable Future, An Agenda for Concerted Action” explains the policies, investments and other actions necessary to fight global warming. CLP is participating in the United Nations Framework Convention on Climate Change and speaking with policy makers, most recently at WBCSD side events of the Subsidiary Body for Scientific and Technical Advice meeting in Bonn, Germany on 14 and 15 May 2007.
- **World Energy Council (WEC) Member Committee of Hong Kong** - a committee of Hong Kong business, government and academic representatives, chaired by CLP Chief Executive Officer, Andrew Brandler. In 2006, the Committee prepared a comprehensive report on energy policy scenarios for Hong Kong to the year 2050. This report forms part of WEC's global energy policy scenario study which will be published in September 2007. The report shows the clear linkage between GHG emissions and energy mix. The Hong Kong report is available upon request.
- **Emissions Trading via the Clean Development Mechanism of the Kyoto Protocol.** CLP's 45 Megawatt wind farm at Nan'ao (Guangdong Province) was approved as a Clean Development Mechanism project by the United Nations (UN) Executive Board. CLP has other renewable energy projects pending approval. CDM projects will be able to generate UN-Certified Emissions Reductions (CERs) for sale to countries with binding obligations under the Kyoto Protocol.
- **Carbon Disclosure Project** – CLP is the only Hong Kong-based company to participate in this global effort to identify climate-related investment risks since its inception in 2002. CLP was among the first in the region to quantify and report independently verified GHG emissions. In 2006, CLP was named to the “Climate Leadership Index” by Innovest for our transparency on the issue.